DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028244
Date Inspected: 20-Aug-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1930
Location: Job Site

CWI Name:	John Pagliero and Barry Drake			**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 13W-W2.2 @ 5180 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Rick Clayborn continuing to perform CJP groove welding repair at location Y=135mm having repair excavation profile of 90mm long x 30mm wide x 10mm deep. Prior welding, the welder was noted excavating the repair using carbon air arc gouging and after its completion, the groove of the excavation was ground smooth by the same welder and then MTd by ABF QC William Sherwood. The welder was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1004-Repairs. During the shift, ABF QC Barry Drake was noted monitoring the welder with measured working current of 130 amperes on 3.2mm E7018H4R electrode. During the shift, repair welding at location mentioned above completed and the welder has moved to another location.

At OBG 13W-W2.8 @ 12570 drop-in top deck plate inside, same welder has performed welding repair on the welded butt joint. The welder was noted welding at same position using the same process and WPS from Y=4200mm to Y=5000mm. The repair excavation profile was measured 750mm long x 35mm wide x 13mm deep and it is being repaired thru Caltrans approved Request for Weld Repair (RWR) #201208-001. Prior welding, the welder was noted excavating the repair using carbon air arc gouging and after its completion, the groove of the excavation was ground smooth by the same welder and then MT'd by ABF QC John Pagliero with no relevant defect noted. This QA performed random verification on the MT and noted same result. During the shift, the same

ABF QC Barry Drake was noted monitoring the welder. At the end of the shift, repair welding was still continuing and should remain tomorrow.

At OBG 13W-W2.1 @ 10100 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Erick Sparks perform CJP groove welding repair at location Y=1600mm having repair excavation profile of 100mm long x 22mm wide x 13mm deep. Prior welding, the welder was noted excavating the repair using carbon air arc gouging and after its completion, the groove of the excavation was ground smooth by the same welder and then MT'd by ABF QC Cris Concha. The welder was observed welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1004-Repairs. During the shift, ABF QC Cris Concha was noted monitoring the welder with measured working current of 132 amperes on 3.2mm E7018H4R electrode. At the end of the shift, repair welding at location mentioned above completed.

Prior welding, ABF QC Pat Swain who was at the vicinity of the welder at the time was told by this QA that the location the welder was about to repair was an SPCM and repair number two (2) and that it needs an Engineer approval prior welding repair. ABF QC informed this QA that he was not aware of the availability of an RWR that pertains to this repair. The welder continued the repair until it was finished. Due to unavailability of the RWR prior to the repair, an Incident Report was generated by this QA.

At OBG 13W-PP123.5-W2.8 BF1 drop-in floor beam inside, ABF welder Lin E Yun was observed continuing to perform repair welding. Prior to perform the repair, another welder was noted excavating the UT detected defects using carbon air arc gouging then ground smooth the groove of the excavation. ABF QC William Sherwood was noted performing the Magnetic Particle Testing (MT) on the defect removal with no relevant defect noted during the test. The repair was located at Y=25 and having boat shape excavation profile of 110mm deep x 25mm wide x 11mm deep. After the completion of the MT, welder Lin E Yun was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. During the shift, ABF QC Barry Drake was noted monitoring the welder with measured working current of 110 amperes on the 3.2mm E7018H4R electrode. During the shift, repair welding at location mentioned above was completed and the welder has moved to another location OBG 13W-PP122-W2.5 BW1 and BF1 drop-in floor beam where he fixed the weld cover and weld access holes of the web and flange weld joints.

At the request of ABF personnel, this QA has performed visual inspection and Magnetic Particle Testing (MT) on the lifting lug bracket removal at 13W-PP121.5-W3 (north side) that was reground and touch up welded due to previously noted linear indications. During the verification, all four bracket remnants that were ground were in compliance to the ABF-RFI-001151R01dated March 31, 2008 required slope of 3:1 ratio and the MT performed on these remnants revealed no relevant indication during the test.

Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer